WHAT IS CLAIMED IS:

1. A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

a.) approximating the object using a figure for each of said frames;

b.) extracting a plurality of points representing the figure for each of said frames;

c.) approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about one of said plurality of points and relative position data about remaining points with reference to said one of said plurality of points; and

d.) describing the object region data using the functions.

2. The method according to claim 1, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

3. The method according to claim 1, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

4. The method according to claim 1, wherein said

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relative position data are components of differential vectors between the one of said plurality of points and remaining points.

5. The method according to claim 1, wherein said object region data comprises parameters of the functions.

6. A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

a) approximating the object using a figure for each of said frames;

b) extracting a plurality of points representing the figure for each of said frames;

c) approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about said plurality of points in a reference frame and relative position data about said plurality of points in a succeeding frame with reference to the position data about said plurality of points in the reference frame; and

d) describing the object region data using the functions.

7. The method according to claim 6, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

8. The method according to claim 6, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

9. The method according to claim 6, wherein said relative position data are components of differential vectors between said plurality of points in the reference frame and said plurality of points in the succeeding frame.

10. The method according to claim 6, wherein said object region data comprises parameters of the functions.

11. A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

a.) approximating the object using a figure for each of said frames;

b.) extracting a plurality of points representing the figure for each of said frames;

c.) approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

d.) describing the object region data using the functions and depth information of the object.

12. The method according to claim 11, wherein said

object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

13. The method according to claim 11, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

14. The method according to claim 11, wherein said object region data is described by using the depth information of the object and parameters of the functions.

15. The method according to claim 11, wherein said depth information is a relative depth and has a discrete level value.

16. A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

approximating the object using a figure for each of said frames;

extracting a plurality of points representing the figure for each of said frames;

approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

describing the object region data using the
functions and display flag information indicating a
range of frames in which the object or each of said
points is visible or not.

5   17. The method according to claim 16, wherein said
object region data comprises information representing
a range of frames in which the object exists in the
video data and information identifying the figure
approximating the object region.

10   18. The method according to claim 16, wherein said
object region data comprises one of information
representing related information linking to the object
and information representing a method of accessing the
related information.

15   19. The method according to claim 16, wherein said
object region data is described by using the display
flag information and parameters of the functions.

20. A method of describing object region data
about an object in video data over a plurality of

20   frames, said method comprising:

a)   approximating the object using a figure for each
of said frames;

b)   extracting a plurality of points representing the
figure for each of said frames;

25 c)   approximating trajectories with functions, the
trajectories being obtained by arranging, in the frames
advancing direction, data indicating positions of said

plurality of points; and

d.)   describing the object region data using the functions and object passing range information indicating a range where the figure approximating the object exist over said plurality of frames.

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21.   The method according to claim 20, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

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22.   The method according to claim 20, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

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23.   The method according to claim 20, wherein said object region data is described by using the object passing range information and parameters of the functions.

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24.   A method of describing object region data about an object moving in a panorama image formed by combining a plurality of frames with being overlapped, said method comprising:

a.)   approximating the object in the panorama image

25   using a figure;

b.)   extracting a plurality of points representing the figure in a coordinate system of the panorama image;

c.)   approximating trajectories with functions, the

trajectories being obtained by arranging, in the frames

advancing direction, data indicating positions of said

plurality of points; and

5   d.)   describing the object region data using the

functions.

25. The method according to claim 24, wherein said

object region data comprises information representing

a range of frames in which the object exists in the

10 video data and information identifying the figure

approximating the object region.

26. The method according to claim 24, wherein said

object region data comprises one of information

representing related information linking to the object

15 and information representing a method of accessing the

related information.

27. The method according to claim 24, wherein

said object region data comprises parameters of the

functions.

20 28. An article of manufacture comprising a

computer usable medium having computer readable program

code means embodied therein and for An article of

manufacture comprising a computer usable medium having

computer readable program code means embodied therein

25 and for describing object region data about an object

in video data over a plurality of frames, the computer

readable program code means comprising:

a.) computer readable program code means for approximating the object using a figure for each of said frames;

b.) computer readable program code means for

5 extracting a plurality of points representing the figure for each of said frames;

c.) computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames

10 advancing direction, position data about one of said plurality of points and relative position data about remaining points with reference to said one of said plurality of points; and

d.) computer readable program code means for

15 describing the object region data using the functions.

 29. An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object in video data over a

20 plurality of frames, the computer readable program code means comprising:

 computer readable program code means for approximating the object using a figure for each of said frames;

25 computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about said plurality

5   of points in a reference frame and relative position data about said plurality of points in a succeeding frame with reference to the position data about said plurality of points in the reference frame; and

computer readable program code means for
10   describing the object region data using the functions.

30.   An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object in video data over

15   a plurality of frames, the computer readable program code means comprising:

computer readable program code means for approximating the object using a figure for each of said frames;

20   computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the

25   trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

computer readable program code means for
describing the object region data using the functions
and depth information of the object.

31. An article of manufacture comprising

5   a computer usable medium having computer readable
program code means embodied therein and for describing
object region data about an object in video data over
a plurality of frames, the computer readable program
code means comprising:

10   a) computer readable program code means for
approximating the object using a figure for each of
said frames;

b) computer readable program code means for
extracting a plurality of points representing the

15   figure for each of said frames;

c) computer readable program code means for
approximating trajectories with functions, the
trajectories being obtained by arranging, in the frames
advancing direction, data indicating positions of said

20   plurality of points; and

d) computer readable program code means for
describing the object region data using the functions
and display flag information indicating a range of
frames in which the object or each of said points is

25   visible or not.

32. An article of manufacture comprising
a computer usable medium having computer readable

program code means embodied therein and for describing object region data about an object in video data over a plurality of frames, the computer readable program code means comprising:

5   computer readable program code means for approximating the object using a figure for each of said frames;

computer readable program code means for extracting a plurality of points representing the

10   figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said

15   plurality of points; and

computer readable program code means for describing the object region data using the functions and object passing range information indicating a range where the figure approximating the object exist over

20   said plurality of frames.

33.   An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object moving in a panorama

25   image formed by combining a plurality of frames with being overlapped, the computer readable program code means comprising:

computer readable program code means for approximating the object in the panorama image using a figure;

computer readable program code means for

5 extracting a plurality of points representing the figure in a coordinate system of the panorama image;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames

10 advancing direction, data indicating positions of said plurality of points; and

computer readable program code means for describing the object region data using the functions.

34.   A computer data signal embodied in a carrier

15 wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to

20 approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

25 program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames

advancing direction, position data about one of said plurality of points and relative position data about remaining points with reference to said one of said plurality of points; and

5   program code portion for causing a computer to describe the object region data using the functions.

35.   A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over

10   a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

15   program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to approximate trajectories with functions, the

20   trajectories being obtained by arranging, in the frames advancing direction, position data about said plurality of points in a reference frame and relative position data about said plurality of points in a succeeding frame with reference to the position data about said

25   plurality of points in the reference frame; and

program code portion for causing a computer to describe the object region data using the functions.

36. A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions and depth information of the object.

37. A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to

5 approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to

10 describe the object region data using the functions and display flag information indicating a range of frames in which the object or each of said points is visible or not.

38. A computer data signal embodied in a carrier

15 wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to

20 approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

25 program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames

advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions and object passing range information indicating a range where the figure approximating the object exist over said plurality of frames.

39. A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object moving in a panorama image formed by combining a plurality of frames with being overlapped, the computer data signal comprising:

program code portion for causing a computer to approximate the object in the panorama image using a figure;

program code portion for causing a computer to extract a plurality of points representing the figure in a coordinate system of the panorama image;

program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions.